

What is claimed is:

- 1 1. A method comprising:
2 calculating link margin for a wireless device using a received power level
3 indication and receiver sensitivity indication; and
4 adjusting at least one of transmit data rate and transmit power level for the
5 wireless device based on link margin.

- 1 2. The method of claim 1, wherein:
2 said wireless device is a wireless client device for use in a wireless network; and
3 said received power level indication includes a received power level (RPL)
4 value.

- 1 3. The method of claim 1, wherein:
2 calculating includes determining a difference between said received power level
3 indication and said receiver sensitivity.

- 1 4. The method of claim 1, wherein:
2 adjusting includes selecting a transmit data rate by determining which of a
3 plurality of ranges said link margin falls within.

- 1 5. The method of claim 1, wherein:
2 adjusting includes entering a power reduction loop when said link margin
3 exceeds a predetermined level.

- 1 6. The method of claim 1, further comprising:
2 determining receiver sensitivity, before calculating link margin, based on a data
3 rate of a received signal.

- 1 7. The method of claim 6, wherein:
2 said received signal is a received beacon signal.

1 8. The method of claim 1, wherein:
2 adjusting includes selecting a maximum data rate and decreasing a transmit
3 power level when said link margin exceeds a predetermined value.

1 9. A wireless device comprising:
2 a wireless transceiver;
3 a link margin determination unit to determine a link margin associated with the
4 wireless transceiver; and
5 a transmit data rate determination unit to select a transmit data rate for the
6 wireless transceiver based on link margin.

1 10. The wireless device of claim 9, wherein:
2 said transmit data rate determination unit selects said transmit data rate by
3 determining which of a plurality of link margin ranges said link margin falls within.

1 11. The wireless device of claim 10, wherein:
2 said transmit data rate determination unit selects a maximum data rate when
3 said link margin exceeds a predetermined value.

1 12. The wireless device of claim 9, further comprising:
2 a transmit power determination unit to adjust a transmit power level of the
3 wireless device based on link margin.

1 13. The wireless device of claim 12, wherein:
2 said transmit power determination unit enters a power reduction loop when said
3 link margin exceeds a predetermined level.

1 14. The wireless device of claim 9, wherein:
2 said link margin determination unit determines said link margin by calculating a
3 difference between a received power level indication and a receiver sensitivity of said
4 wireless transceiver.

1 15. The wireless device of claim 14, wherein:
2 said receiver sensitivity is estimated based upon a receive data rate.

1 16. The wireless device of claim 14, wherein:
2 said wireless device is a wireless client device for use within a wireless local
3 area network; and
4 said received power level indication includes a received power level (RPL)
5 value.

1 17. An article comprising a storage medium having instructions stored thereon that,
2 when executed by a computing platform, result in:
3 calculating link margin for a wireless device using a received power level
4 indication and receiver sensitivity indication; and
5 adjusting at least one of transmit data rate and transmit power level for the
6 wireless device based on link margin.

1 18. The article of claim 17, wherein:
2 calculating includes determining a difference between said received power level
3 indication and said receiver sensitivity.

1 19. The article of claim 17, wherein:
2 adjusting includes selecting a transmit data rate by determining which of a
3 plurality of ranges said link margin falls within.

1 20. The article of claim 17, wherein:
2 adjusting includes entering a power reduction loop when said link margin
3 exceeds a predetermined level.

1 21. A wireless device comprising:
2 at least one dipole antenna;
3 a wireless transceiver coupled to said at least one dipole antenna;
4 a link margin determination unit to determine a link margin associated with the
5 wireless transceiver; and
6 a transmit data rate determination unit to select a transmit data rate for the
7 wireless transceiver based on link margin.

1 22. The wireless device of claim 21, wherein:
2 said transmit data rate determination unit selects said transmit data rate by
3 determining which of a plurality of link margin ranges said link margin falls within.

1 23. The wireless device of claim 21, further comprising:
2 a transmit power determination unit to adjust a transmit power level of the
3 wireless device based on link margin.

1 24. The wireless device of claim 21, wherein:
2 said at least one dipole antenna includes multiple dipole antennas in an antenna
3 diversity arrangement.

1 25. A method comprising:
2 selecting a transmit data rate for a wireless transceiver based on a calculated link
3 margin; and
4 entering a power reduction loop to reduce a transmit power level of said
5 wireless transceiver when said calculated link margin exceeds a predetermined level.

1 26. The method of claim 25, wherein:
2 selecting a transmit data rate includes determining which of a plurality of ranges
3 said link margin falls within.

1 27. The method of claim 25, wherein:
2 selecting a transmit data rate includes selecting a maximum data rate when said
3 calculated link margin exceeds said predetermined level.

1 28. The method of claim 27, wherein:
2 said maximum data rate is user specified.

1 29. The method of claim 25, wherein said power reduction loop includes:
2 reducing a transmit power level by a first predetermined amount and
3 transmitting a signal;
4 determining whether an acknowledgement signal has been received in response
5 to transmitting said signal; and
6 when an acknowledgement signal has been received in response to transmitting
7 said signal, repeating reducing and determining.

1 30. The method of claim 29, wherein said power reduction loop further includes:
2 when an acknowledgement signal has not been received in response to
3 transmitting said signal, increasing said transmit power level by a second predetermined
4 amount.